Milestones and Indicators for Postsecondary Success

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Key Topics

- California Community College (CCC) Context
- Origin and advantages of new indicator framework
- Analysis of CCC data
- Closer look at performance gaps
- Relevance to policy and practice

The Challenges

- Most students not prepared for college work

- Most attend part-time; work too much

- Inadequate college budgets

- Low completion rates

- Huge and complex CCC system

- CCC students are the future CA workforce
  - 75% of public postsecondary enrollments; 80% of Latinos
  - Latino % of working-age pop. from 34% to 50% by 2040
  - 16% of working-age Latino adults have a college degree (associate or higher), compared to 50% of white adults

Community Colleges Enroll Most Undergraduates – and Large Portion of Latino and Black Populations
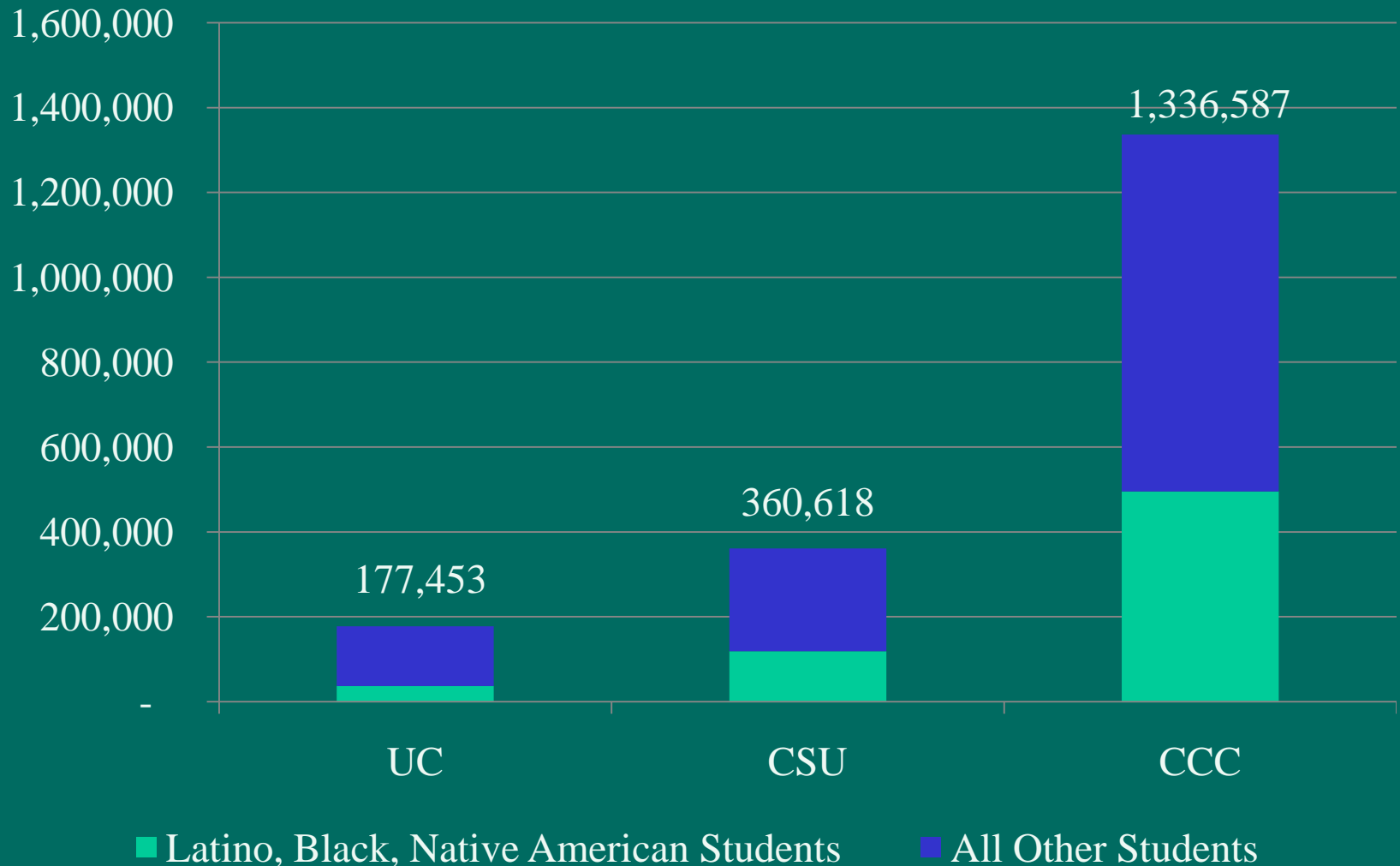
Traditional Measures Insufficient

- Generally limited to retention and graduation rates, and transfer for community colleges
- Ignore intermediate outcomes
- Offer no guidance on:
  - Where and why students fall off the pathway
  - What colleges can do to improve

Research Literature a Valuable Source of Information

- Began with literature review on student success
- Consensus that graduation most likely when:
  - Higher income
  - Parents went to college
  - Good academic preparation
  - Enroll soon after high school graduation
- More helpful: research points to
  - Achievements along the college pathway that may give students momentum
  - More successful academic patterns

A Framework for Better Analysis

Two components (based on literature review)

- ***Milestones*** – to better understand the problem
  - measurable, intermediate educational achievements that students reach along the path to degree completion
- ***Success Indicators*** – to point to solutions
  - academic patterns that predict the likelihood that students will reach milestones

Milestones	Success Indicators

• Retention
• Complete needed remediation
• Transition to college-level coursework
• Earn one year of college-level credits
• Complete general education (GE)
• Complete a community college transfer curriculum
• Transfer from community college to university
    • Without completing curriculum
    • After completing curriculum
• Complete certificate or degree
	Remediation:
	• Begin coursework in first term
	Gateway Courses:
	• Complete college-level math/English in the first year or two
	• Complete a college success course
	Credit Accumulation and Related Academic Behaviors:
	• High rate of course completion
	• Complete 20-30 credits in first year
	• Earn summer credits
	• Enroll full time
	• Enroll continuously, without stopouts
	• On-time registration for courses
	• Maintain adequate academic performance

California Community Colleges Analysis

Cohort for *Steps to Success*

- All first-time credit students in 2000-01, tracked over 7 years
- Subset of "degree seekers" (> 6 units in year 1); 63% of total
- N = 247,493
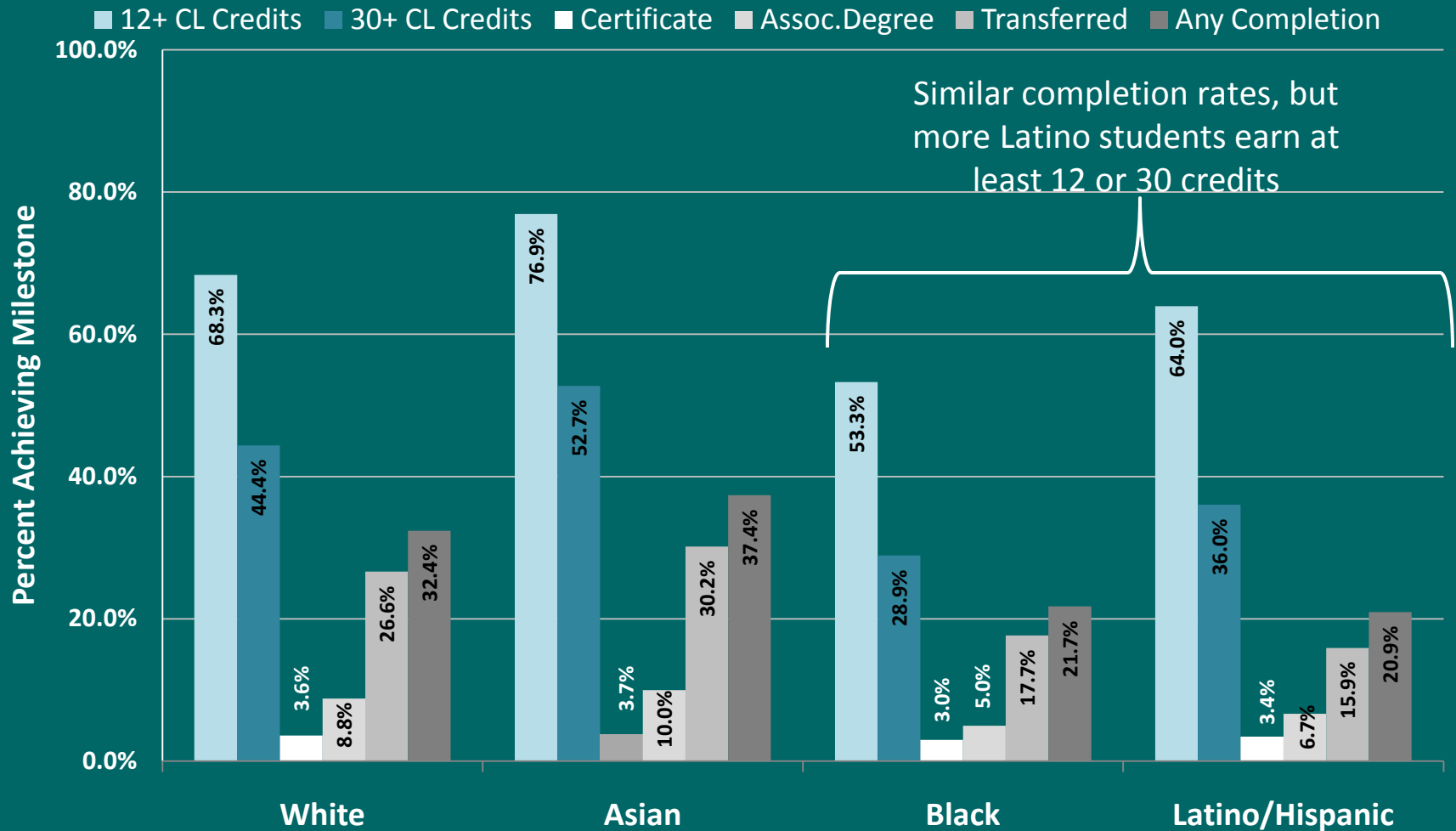- Limitations – no info on SES, academic preparation

Data Files

1. Student information
2. Course enrollments over the 7 years, by term
3. Course information
4. Degrees, certificates awarded within that period
5. Transfers to universities within that period
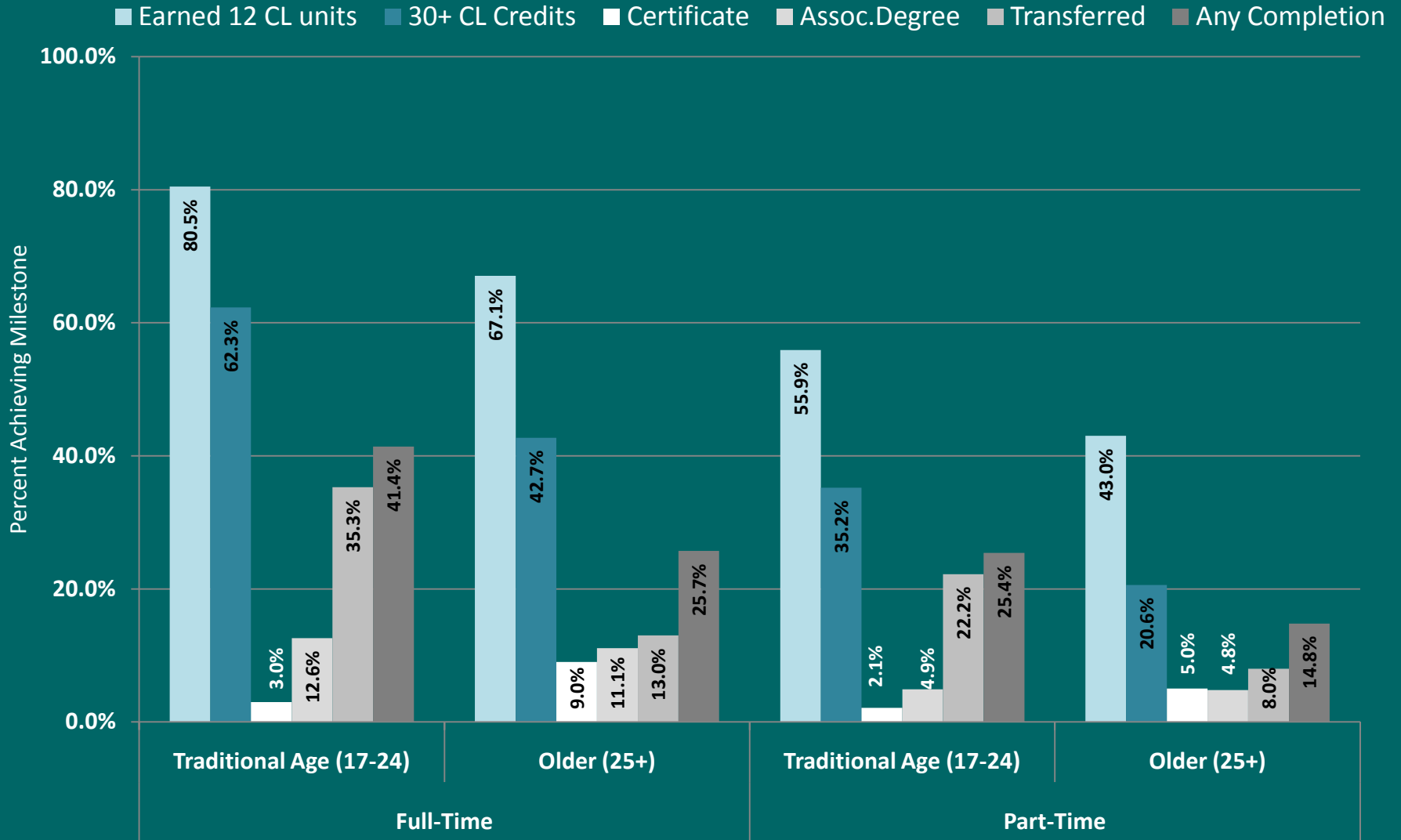6. Financial aid (fee waiver)

Milestones Point to Where Student Progress Stalls

California State University, Sacramento
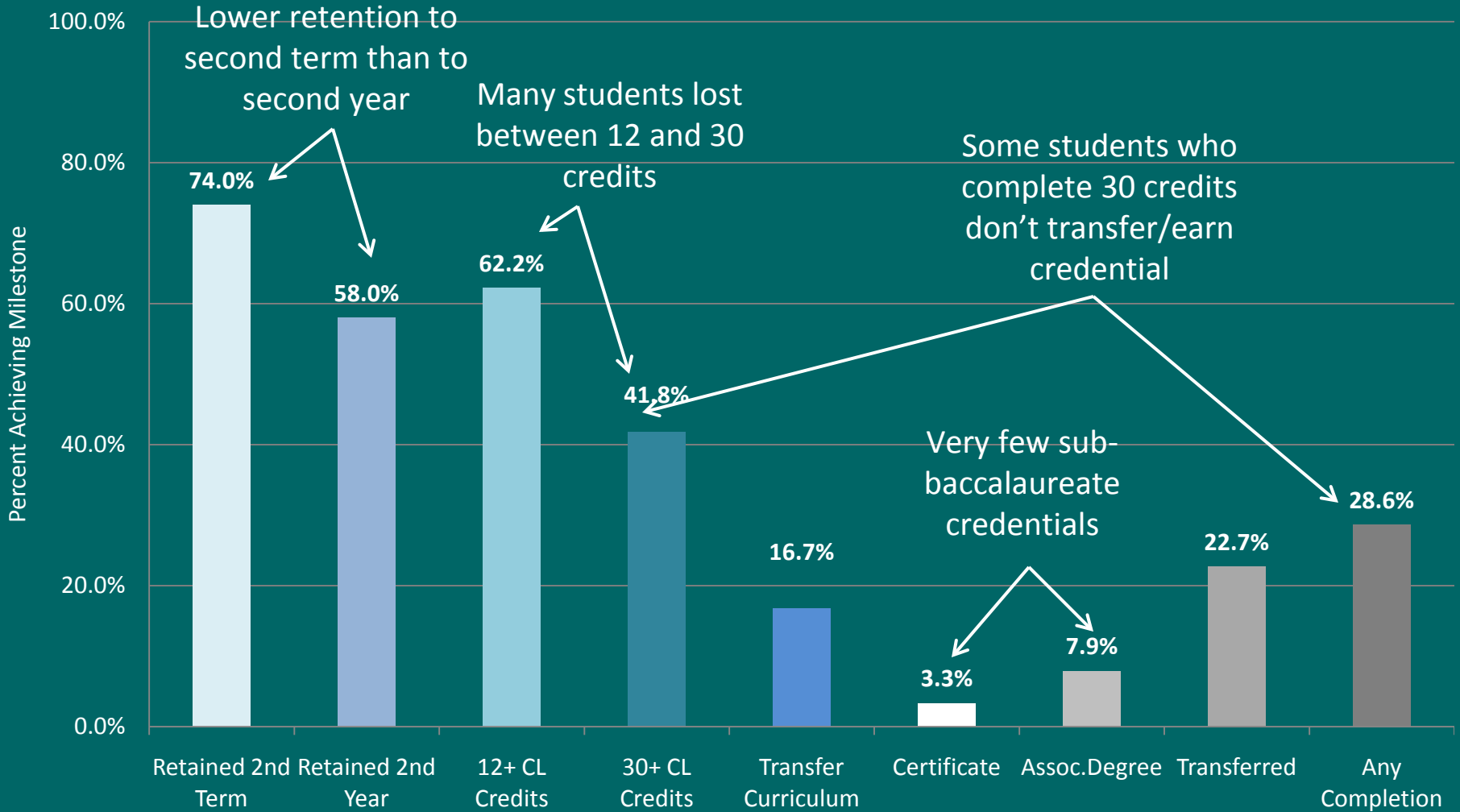
Differences in Achievements Among Groups

Legend: ■ 12+ CL Credits ■ 30+ CL Credits ■ Certificate ■ Assoc.Degree ■ Transferred ■ Any Completion

Y-axis: Percent Achieving Milestone (0.0% to 100.0%)

Callout: Similar completion rates, but more Latino students earn at least 12 or 30 credits

White
- 12+ CL Credits: 68.3%
- 30+ CL Credits: 44.4%
- Certificate: 3.6%
- Assoc.Degree: 8.8%
- Transferred: 26.6%
- Any Completion: 32.4%

Asian
- 12+ CL Credits: 76.9%
- 30+ CL Credits: 52.7%
- Certificate: 3.7%
- Assoc.Degree: 10.0%
- Transferred: 30.2%
- Any Completion: 37.4%

Black
- 12+ CL Credits: 53.3%
- 30+ CL Credits: 28.9%
- Certificate: 3.0%
- Assoc.Degree: 5.0%
- Transferred: 17.7%
- Any Completion: 21.7%

Latino/Hispanic
- 12+ CL Credits: 64.0%
- 30+ CL Credits: 36.0%
- Certificate: 3.4%
- Assoc.Degree: 6.7%
- Transferred: 15.9%
- Any Completion: 20.9%

Milestone Achievement Among Degree Seekers
by Age and Enrollment Status

Legend: ■ Earned 12 CL units ■ 30+ CL Credits ■ Certificate ■ Assoc.Degree ■ Transferred ■ Any Completion

Y-axis: Percent Achieving Milestone (0.0% to 100.0%)

Full-Time
- Traditional Age (17-24): Earned 12 CL units 80.5%, 30+ CL Credits 62.3%, Certificate 3.0%, Assoc.Degree 12.6%, Transferred 35.3%, Any Completion 41.4%
- Older (25+): Earned 12 CL units 67.1%, 30+ CL Credits 42.7%, Certificate 9.0%, Assoc.Degree 11.1%, Transferred 13.0%, Any Completion 25.7%

Part-Time
- Traditional Age (17-24): Earned 12 CL units 55.9%, 30+ CL Credits 35.2%, Certificate 2.1%, Assoc.Degree 4.9%, Transferred 22.2%, Any Completion 25.4%
- Older (25+): Earned 12 CL units 43.0%, 30+ CL Credits 20.6%, Certificate 5.0%, Assoc.Degree 4.8%, Transferred 8.0%, Any Completion 14.8%

Percent of Degree Seekers Completing a Certificate, Degree, or Transfer in Each Year
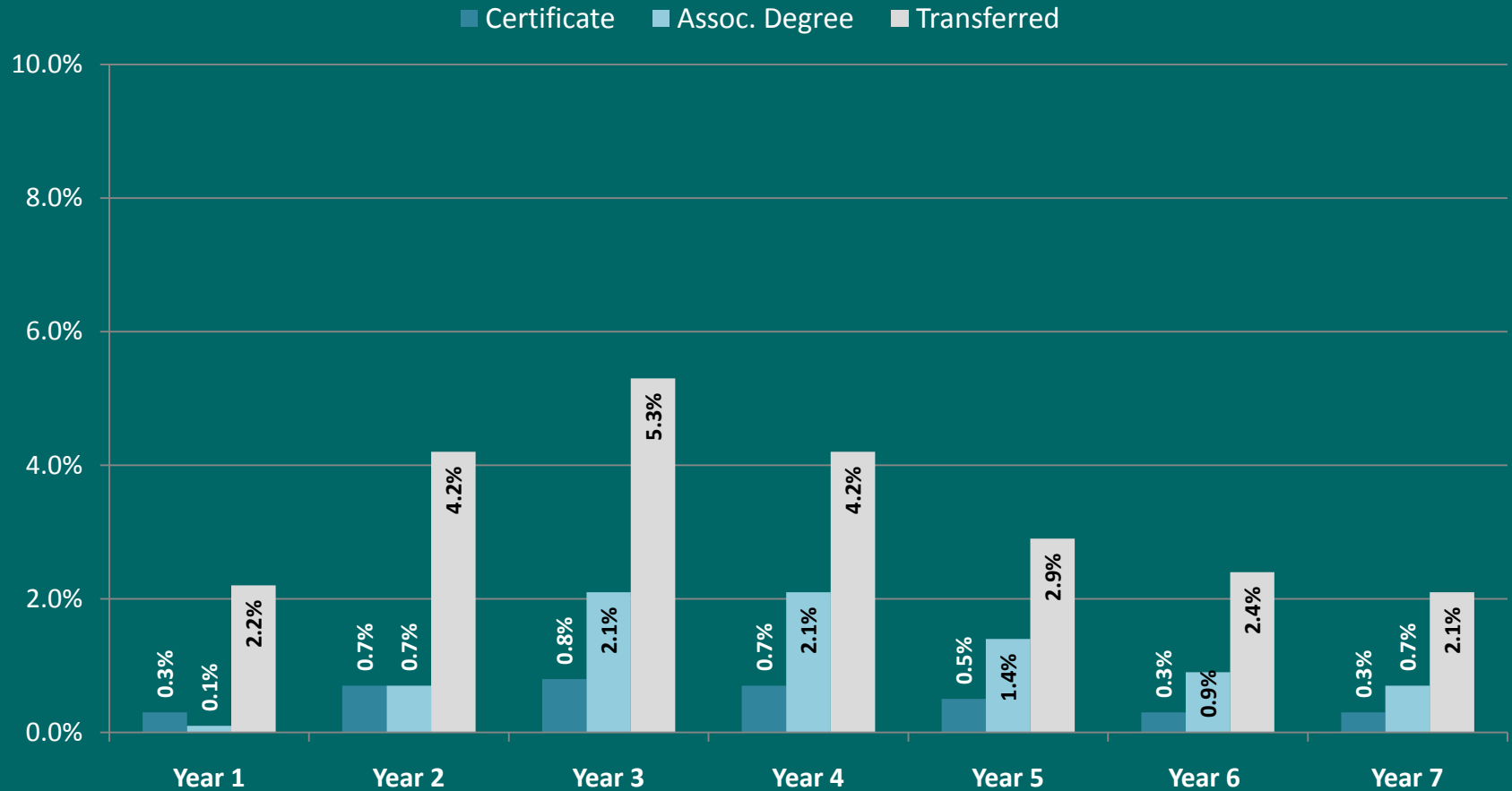
Success Indicators are Validated in the Data
(See *Steps to Success* Appendix on p. 17)

Percent Who Completed (Certif/Assoc/Transfer) by Success Indicator Behavior - Yes/No

Success Indicator:	Yes	No
CL math within two years	61%	22%
CL English within two years	51%	21%
Summer credits	45%	15%
Full-time in first term	39%	21%
On-time course registration	32%	24%
Continuous enrollment	36%	29%

Early Credit Accumulation Important
Even for Short-term Outcomes

	20+ First-year Credits?	
Milestone:	Yes	No
Retention to 2nd year	89%	43%
Earn 12+ college-level credits	98%	51%
Earn 30+ college-level credits	87%	28%
Earn certificate	6%	2%
Earn associate degree	21%	4%
Transfer	46%	16%

Importance of Student Support

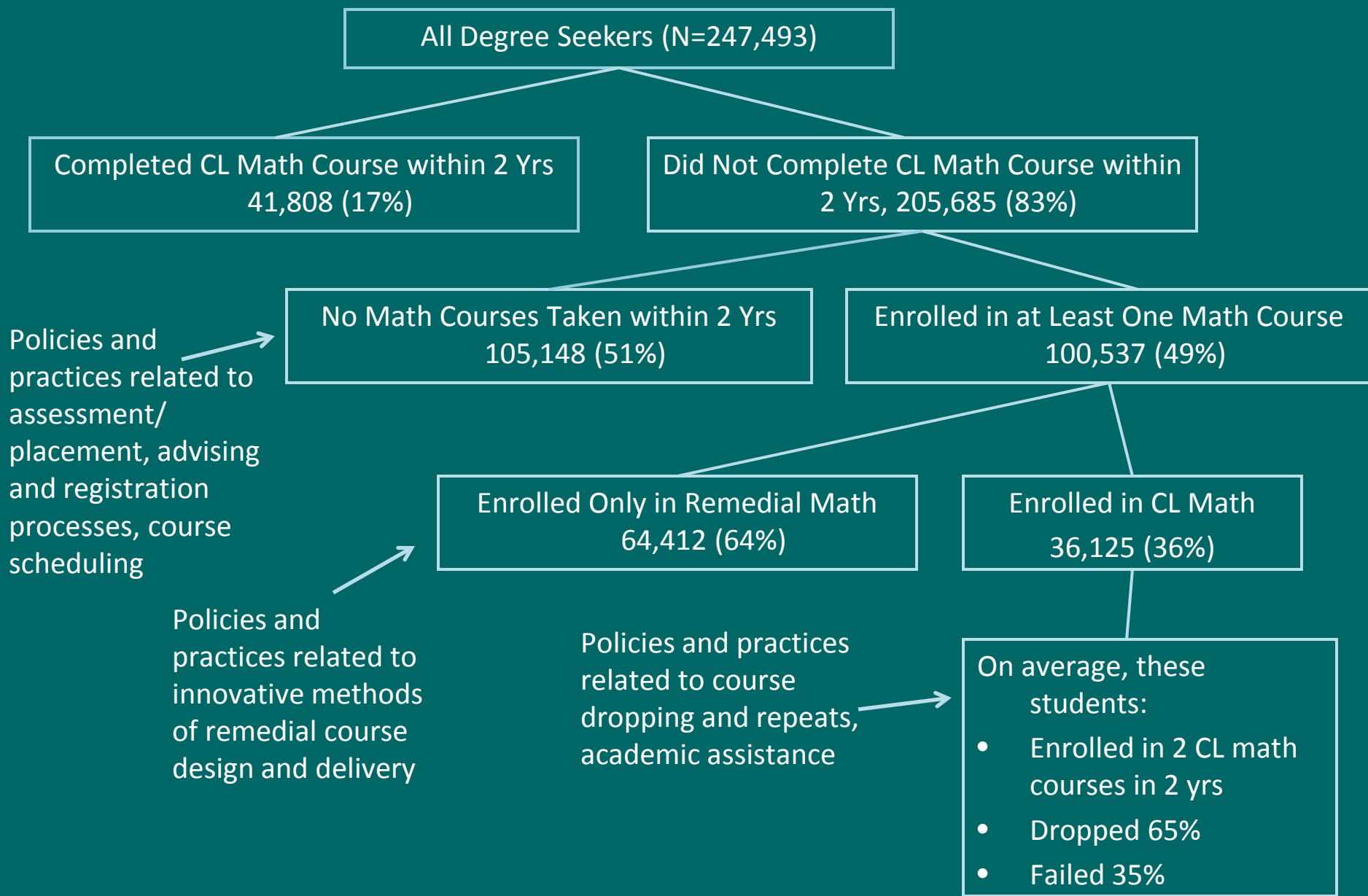| Milestone:	College Success Course?	
	Yes	No
Retention to 2nd year	73%	54%
Earn 12+ college-level credits	77%	58%
Earn 30+ college-level credits	59%	37%
Earn certificate	3%	3%
Earn associate degree	12%	7%
Transfer	27%	21%

Regression Analysis Confirms Relationships

- Success indicators predict completion after controlling for:
  - Age, Gender, Race/ethnicity
  - Academic preparation (separate study of FL)
  - Financial aid receipt
  - Institutional effects

- Significant predictors when applied just to specific groups (older students, racial/ethnic group)
- *Colleges can't change demographics but they can affect these academic and course-taking patterns*

College Success Course – Digging Deeper
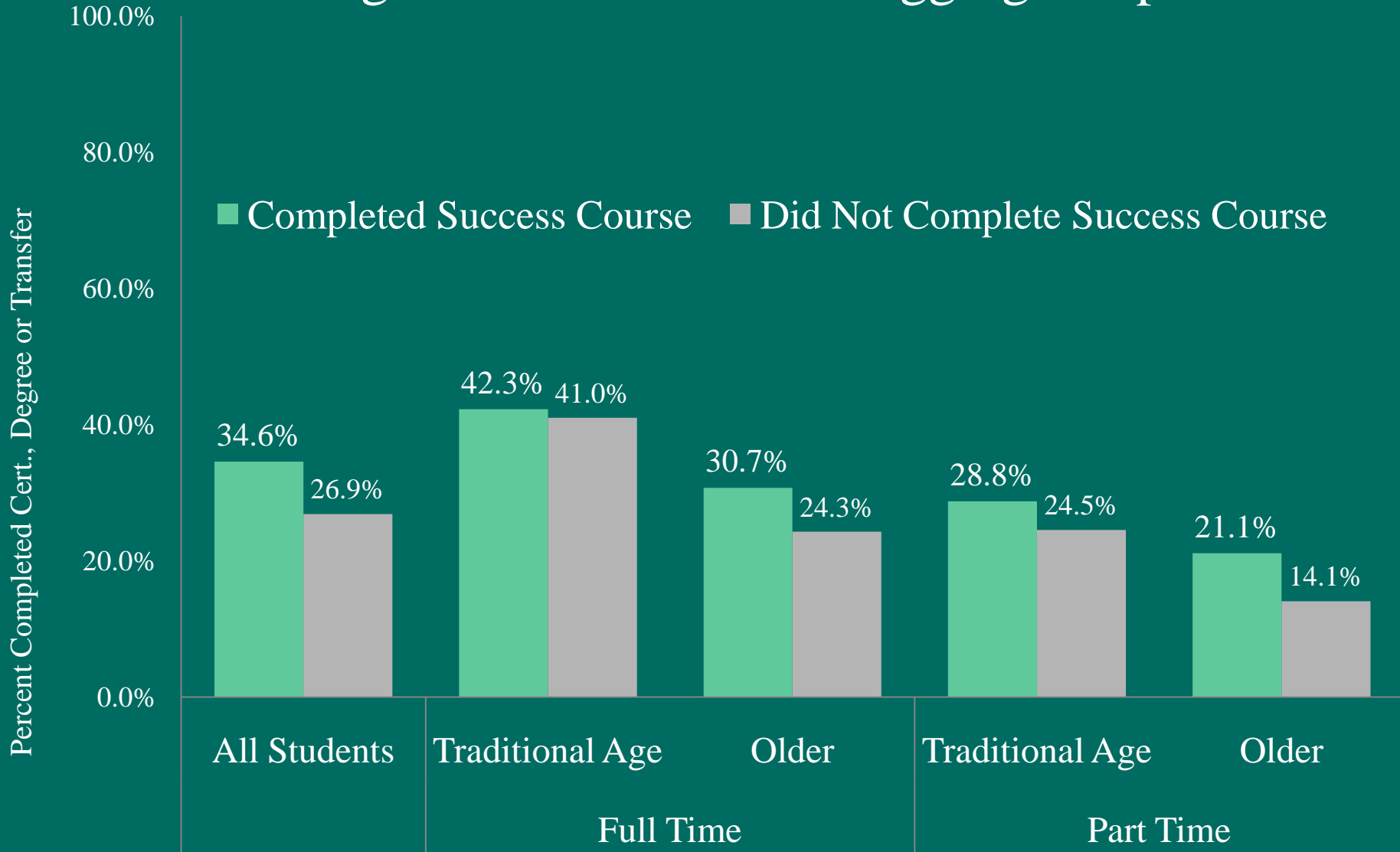
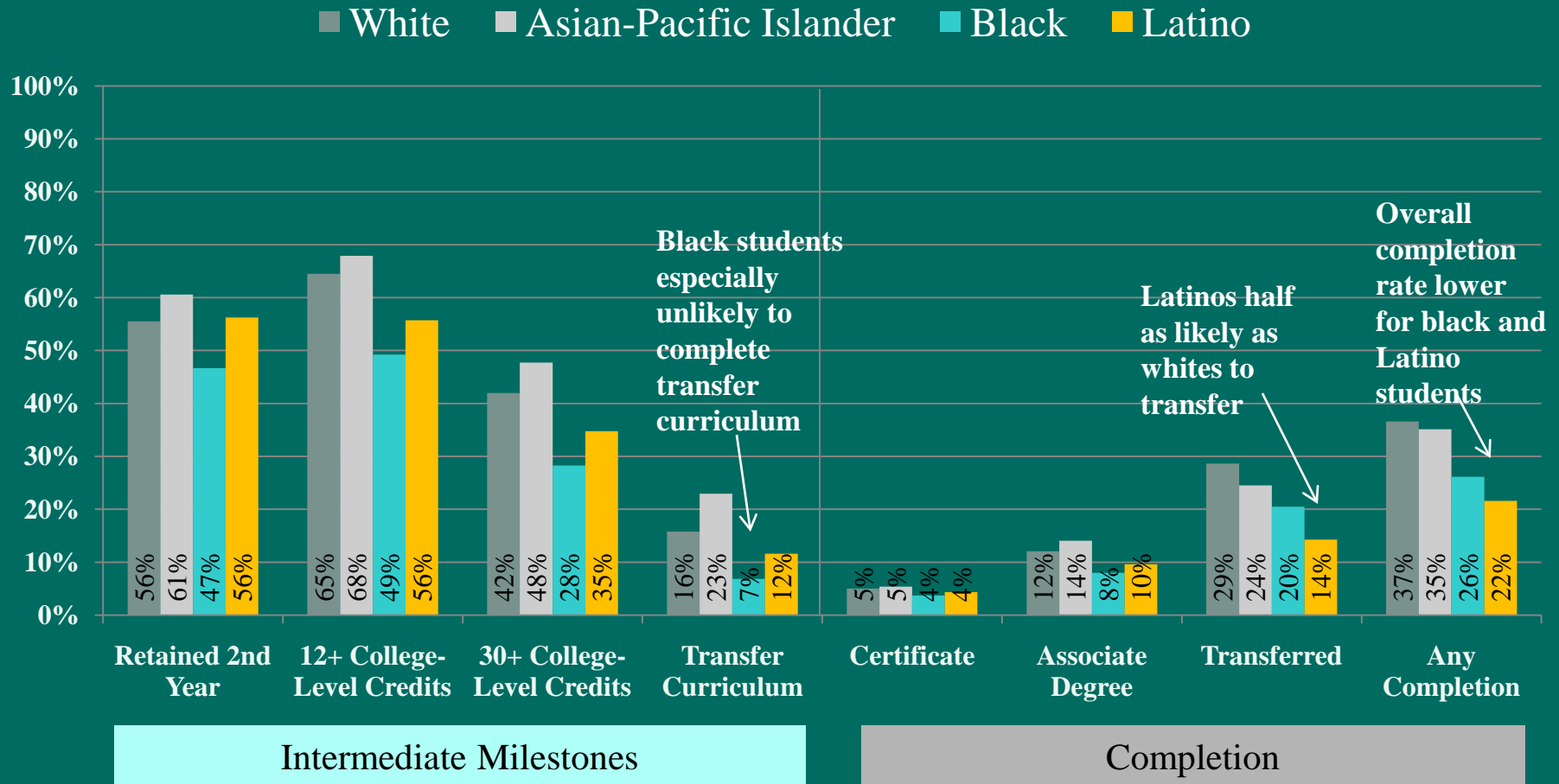# Digging Deeper into Problems Can Point to Solutions

All Degree Seekers (N=247,493)

Completed CL Math Course within 2 Yrs
41,808 (17%)

Did Not Complete CL Math Course within 2 Yrs, 205,685 (83%)

No Math Courses Taken within 2 Yrs
105,148 (51%)

Enrolled in at Least One Math Course
100,537 (49%)

Policies and practices related to assessment/ placement, advising and registration processes, course scheduling

Enrolled Only in Remedial Math
64,412 (64%)

Enrolled in CL Math
36,125 (36%)

Policies and practices related to innovative methods of remedial course design and delivery

Policies and practices related to course dropping and repeats, academic assistance

On average, these students:
- Enrolled in 2 CL math courses in 2 yrs
- Dropped 65%
- Failed 35%

Some Examples of Applying Results to Changing Policy and Practice

| Problem Identified	Possible Changes
Low percentage of developmental education students completing remediation	• Require early enrollment in remedial coursework • Redesign developmental courses into modules • Contextualized developmental ed for vocational programs
Low percentage of students completing math early	• Better align curriculum and assessments with high schools to improve college readiness • Early advising that focuses on importance of taking math early • Innovative developmental math instruction
Low percentage of students reach a threshold of credit accumulation in the first year	• Increase financial aid to encourage full-time attendance • Increase use of college success courses, early advising, etc. • Charge lower per-credit fees for enrolling in a full-time credit load
Relatively low rate of completing courses (i.e., many course drops and failures)	• Allocate portion of funding on course completion in addition to census enrollment • Early alert systems and improved tutoring services • Limit course drops and repeats and late registration

A Focus on Performance Gaps

Latino and Black Students Less Likely than White and Asian Students to Reach Milestones

Legend: White | Asian-Pacific Islander | Black | Latino

Intermediate Milestones

Milestone	White	Asian-Pacific Islander	Black	Latino
Retained 2nd Year	56%	61%	47%	56%
12+ College-Level Credits	65%	68%	49%	56%
30+ College-Level Credits	42%	48%	28%	35%
Transfer Curriculum	16%	23%	7%	12%

Completion

Milestone	White	Asian-Pacific Islander	Black	Latino
Certificate	5%	5%	4%	4%
Associate Degree	12%	14%	8%	10%
Transferred	29%	24%	20%	14%
Any Completion	37%	35%	26%	22%

Black students especially unlikely to complete transfer curriculum

Latinos half as likely as whites to transfer

Overall completion rate lower for black and Latino students

Note: students can be double-counted in the certificate, associate degree, and transfer measures

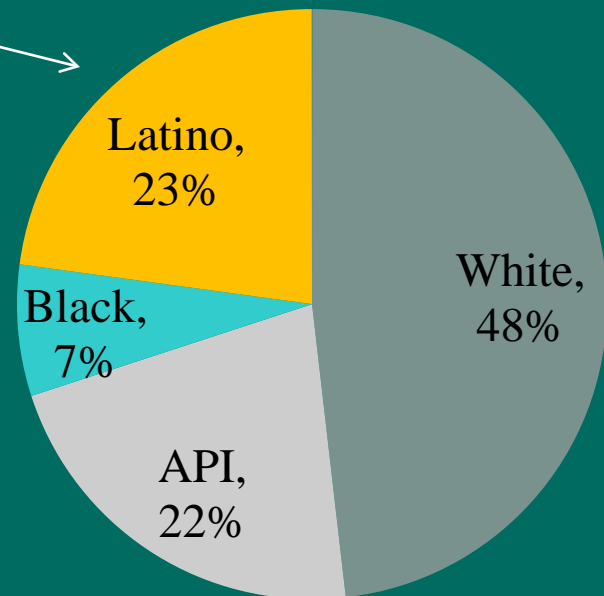# Under-Represented Minority Students are a Smaller Share of "Completers" than of Degree Seekers
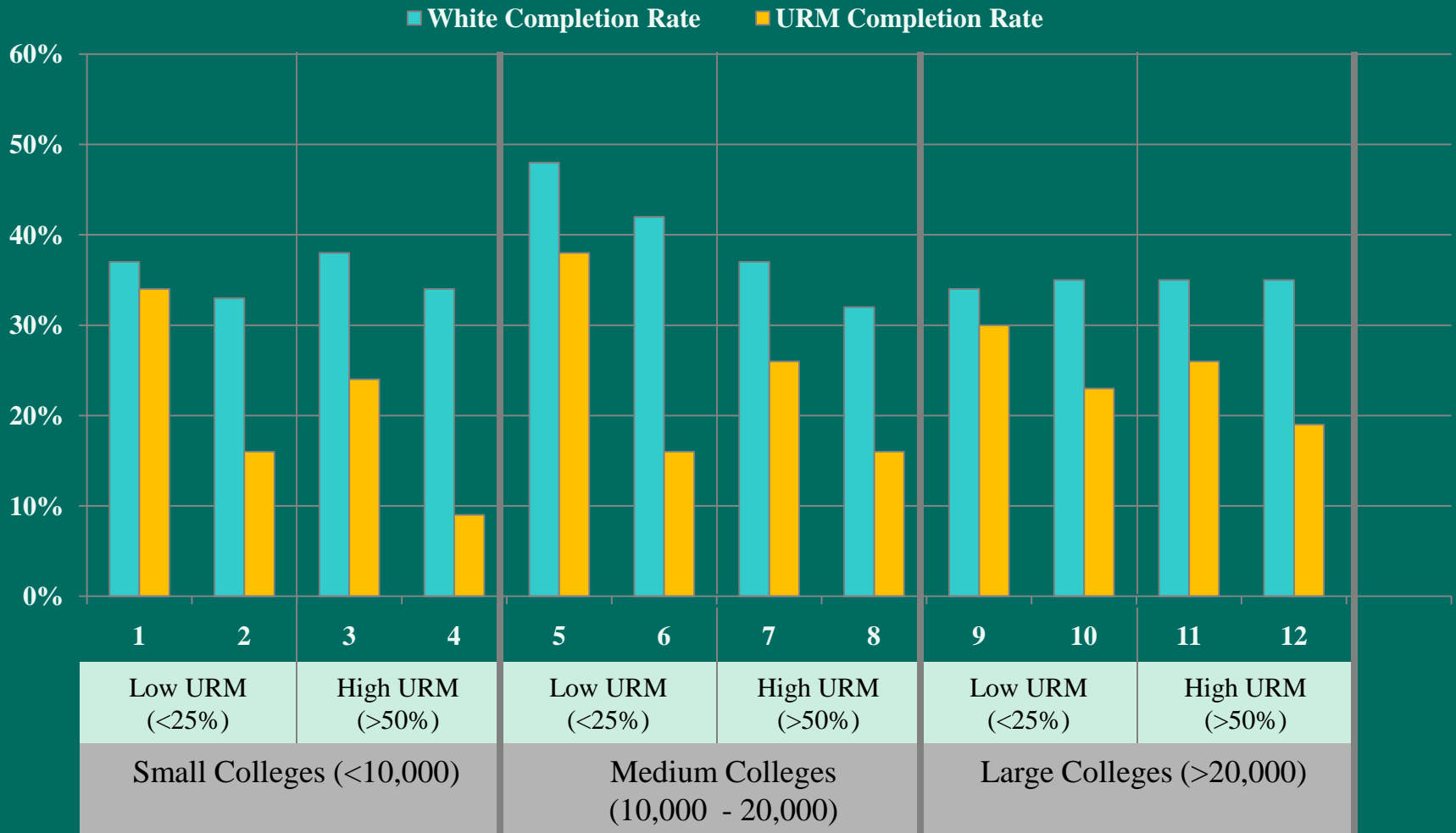
Degree Seekers

Latino, 34%

White, 40%

Black, 9%

API, 18%
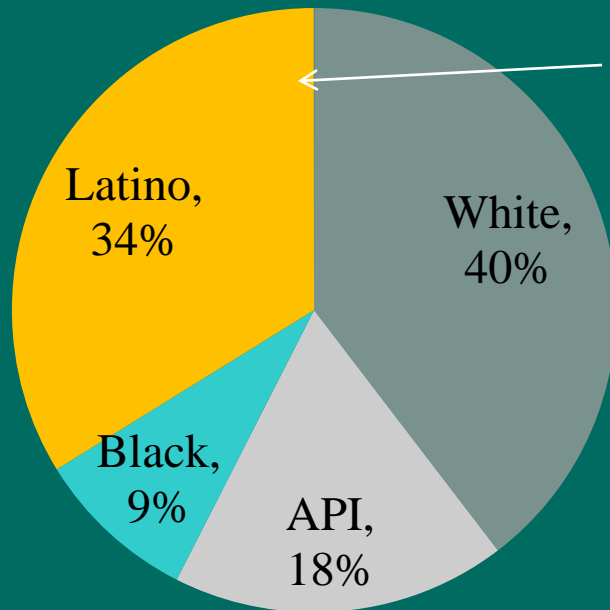
Latinos were 1/3 of degree-seekers but < 1/4 of completers

Completers

Latino, 23%

White, 48%

Black, 7%

API, 22%

Transfer Doesn't Mean Completing Two Years of Credit, Especially for Black Students

Percent of Transfer Students

- ■ % of Transfers that Completed Transfer Curriculum
- ■ % of Transfers that Completed Associate Degree

Less than ½ of transfers completed at least 60 transferable credits (including math and English)

Black students especially unlikely to complete a transfer curriculum

Latinos were the least likely to transfer; those who did were more likely to complete curriculum or degree

	All Transfers	White	API	Black	Latino
Transfer Curriculum	43%	39%	57%	22%	48%
Associate Degree	27%	25%	26%	23%	36%

Transfer Destination Varies by Race/Ethnicity

White Transfer Students

- For-Profit, 8%
- Out-of-State Private, 10%
- Out-of-State Public, 22%
- In-State Private, 12%
- UC, 10%
- CSU, 38%

API Transfer Students

- For-Profit, 7%
- Out-of-State Private, 5%
- Out-of-State Public, 12%
- In-State Private, 10%
- UC, 21%
- CSU, 45%

Black and Latino students twice as likely as white and API students to enroll in a for-profit institution

Black Transfer Students

- For-Profit, 19%
- Out-of-State Private, 14%
- Out-of-State Public, 28%
- In-State Private, 8%
- UC, 5%
- CSU, 26%
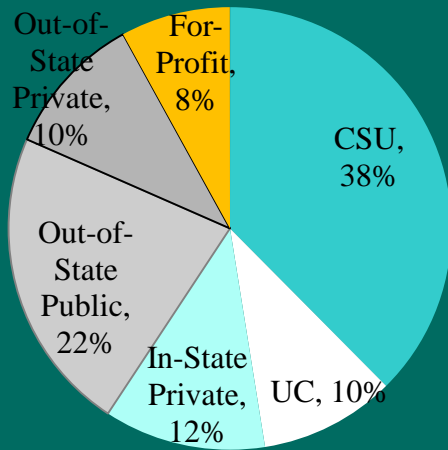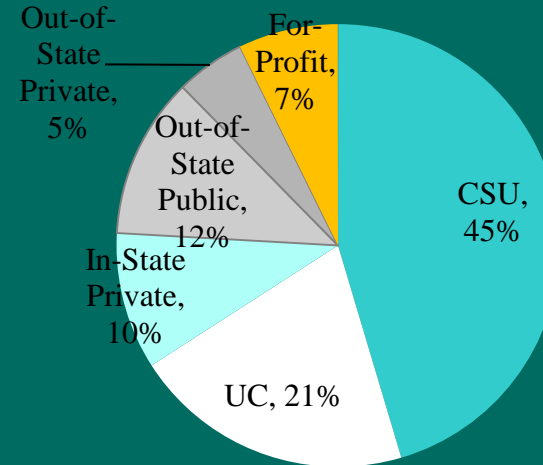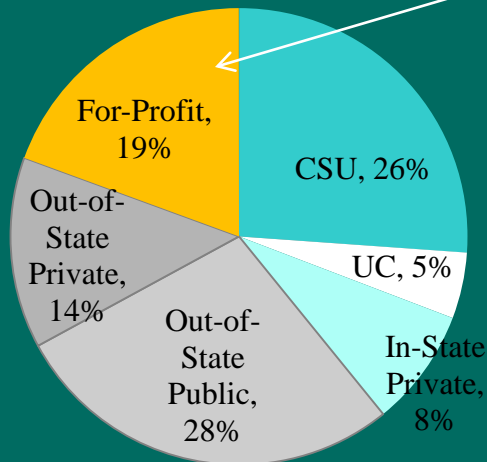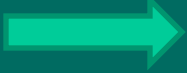
Latino Transfer Students

- For-Profit, 16%
- Out-of-State Private, 5%
- Out-of-State Public, 10%
- In-State Private, 10%
- UC, 9%
- CSU, 50%

More Examples of Success Indicators from Newer Cohort

- Passed college-level English within 2 years?
    - Yes ➡ 50% completed
    - No ➡ 20% completed
- Passed college-level math within 2 years?
    - Yes ➡ 55% completed
    - No ➡ 21% completed
- Accumulated at least 20 credits in first year?
    - Yes ➡ 59% completed
    - No ➡ 21% completed

Few Students Follow Successful Enrollment Patterns
Racial Gaps Appear Here as Well
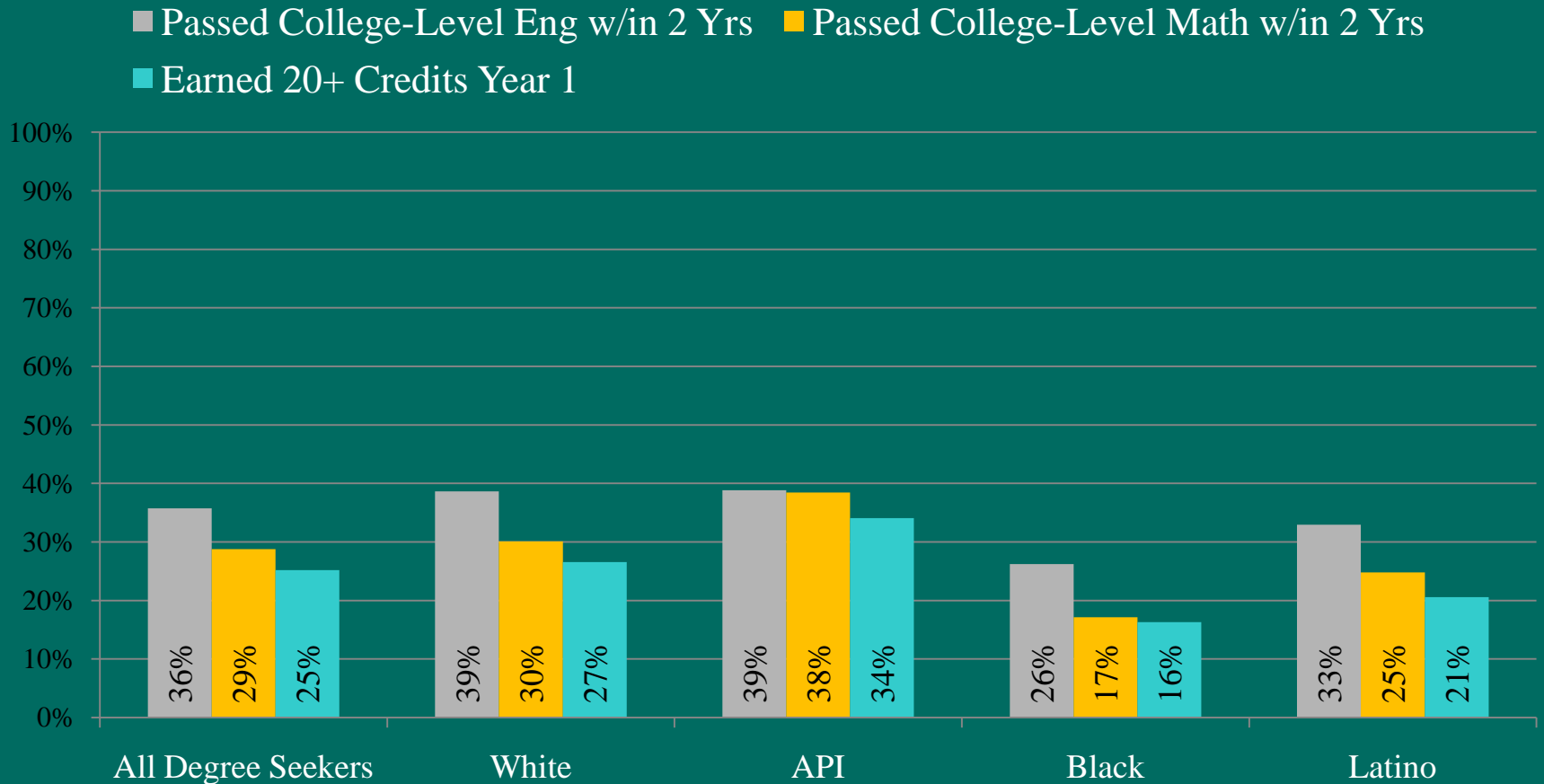
Recommendation:
Use Milestone/Indicator Framework to Increase Student Success

- The Chancellor's Office should coordinate a system-wide effort to analyze cohort data for every college
  - College set goals for improving completion/reducing gaps
  - Colleges use common set of milestones/success indicators
  - Supplement cohort analysis (interviews, campus data)
  - Formal process to share practices and their impact
- Colleges publicly report milestone data by race/ethnicity
- Colleges identify common policy barriers

A Model for Improving Student Outcomes

Institutional Practices → Public reporting of milestone achievements → **State/System Policies**

Institutional Practices (left column):

Colleges do cohort analysis of student progress through milestones, by race
• Where do students get stalled? Which students?
• What known successful patterns are they not following?

↓

Colleges do additional analysis (e.g., student interviews, data on use of services) to understand why students are getting stalled and not following successful patterns

↓

Colleges implement new practices based on data analysis, share results with other colleges, identify effective practices as well as barriers to implementing such practices

↓

California Community College System

State/System Policies (right column):

Stakeholders (interest groups, community advocates, policy researchers, etc.) compare current performance with desired outcomes

↓

Stakeholders examine current policies to determine if they support or create barriers to student success

↓

Stakeholders draw from practices in other states to construct new policy agendas

↓

Governor, Legislature, CCC Board of Governors

Identify opportunities for policy changes to support and bring to scale successful practices

Changes in practice → • Increased completion
• Reduced racial/ethnic gaps in completion ← **Changes in policy**

IHELP Contact Information

Reports and presentations: www.csus.edu/ihelp

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Series of reports on community college student success:

Rules of the Game, February 2007

Beyond the Open Door, August 2007

Invest in Success, October 2007

It Could Happen, February 2008

Crafting a Student-Centered Transfer Process in CA, August 2009

Steps to Success, October 2009

Divided We Fail, October 2010

The Road Less Traveled, February, 2011